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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHEN, WENPENG

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 04/09/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

08/879,467

Applicant(s)

DURBIN ET AL.

Examiner

Wenpeng Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 8-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Examiner's responses to Applicant's remark

1. Applicants' arguments filed on 1/31/2003 have been fully considered but they are not persuasive. The Examiner has thoroughly reviewed Applicants' arguments but firmly believes that the cited reference to reasonably and properly meet the claimed limitations.

2. Applicants' argument -- The Applicants argued that Postman et al. (US patent 6,041,374) does not teach the feature of "an image buffer, ... that stores the plurality of images generated by the first processing circuit," because the passage of column 33, lines 1-12 of Postman teaches "storing the resulting alphanumeric characters" not the images. Furthermore, Postman teaches away from the image capture unit 202 of this present application.

Examiner's response -- The Examiner does not agree with this conclusion. The passage of column 33, lines 1-12 of Postman states:

"Preferably, the amount of nonvolatile memory on the PC card will be sufficient to store a whole day's worth of *scan data* which can then be downloaded at the end of the day onto another host with a PCMCIA slot by removing the PC card from its portable host computer and placing the PCMCIA card into the PCMCIA slot of a desktop cost/mainframe etc. The preferred functionality of the PC card will include hardware and software on the PC card which can *decode undecoded barcode scanning data and store the resulting alphanumeric characters either in any memory of the host computer including the keyboard buffer or the memory on the PC card or both.*"

In the passage, Postman clearly teaches that the scan data are stored. The scan data are data of the plurality of scanned images. Although in a preferred embodiment, Postman decodes scanned images in the PC card, Postman's teaching also includes other embodiments in which raw scanned data are stored and inputted into a host computer for decoding, without decoding

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in a PC card, as evidently in column 7, lines 32-51. It is clear that the passage of column 33, lines 1-12 supports both options, because the cited feature of *"storing the resulting alphanumeric characters either in any memory of the host computer including the keyboard buffer or the memory on the PC card or both"* does not require storing the resulting alphanumeric characters only in the PC card.

The Examiner likes to point out that the passages related to Figs. 23, 24, and 37 also teach this feature.

With regard to "teaching-away" issue, the Examiner likes to point out that the feature cited by the Applicants in the response is not recited in the claims at issue. Furthermore, the advantage argued by the Applicants is actually discussed in column 32, lines 35-67 of Postman for Fig. 22. The same spirit is clearly applicable to Figs. 23-24.

3. Applicants' argument -- The Applicants argued that Postman et al. (US patent 6,041,374) does not teach the feature of "predetermined number of images." Instead, Postman's "predetermined number of samples" is referred to data of a single image.

Examiner's response -- The Examiner does not agree with this conclusion. The passage of column 51, lines 39-41, Postman states:

"The PC card will generate an interrupt when it has stored therein a predetermined number of samples that need to be stored in the host RAM."

As evident from the Abstract, a sample is referred to a scanned image. Therefore, the above-referred "samples" is "images." The Applicants cited the passage in column 51, lines 58-61 to make interpretation that Postman only teaches "predetermined number of samples from a single image":

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"Once the barcode client application has processed the interrupt(s) from the PC card and knows that there is sample data from a complete barcode stored in the barcode image data buffer 778, the barcode client application 786 invokes the barcode decode software routine 798 via data path 796."

The passage only states that when a sample data of a complete barcode is ready, the barcode application invokes the decode software. It does not say that there is only sample data of one image.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

5. Claims 1, 3, and 15-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Postman et al. (US patent 6,041,374 cited previously.)

a. With regard to Claims 1 and 3, Postman teaches a coded image capture and decoding system (Figs. 23-24) comprising:

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-- a capture system comprising (column 7, line 52 to column 8, line 37; combination of blocks 505 and 510 of Figs. 23-24):

- an optical system that captures image data from coded targets; (column 7, line 52 to column 8, line 37; column 33, lines 1-12; In a day, Image data from many coded targets are captured and stored.)

- a first processing circuit, coupled to the optical system, that generates a plurality of images based on image data received from the optical system; (column 7, line 52 to column 8, line 37; the electronic parts receiving signal from photodiode 24 and generating data inputting to PC card)

- an image buffer, coupled to the first processing circuit, that stores the plurality of images generated by the first processing circuit; (column 33, lines 1-12)

-- a host system comprising (block 500 of Figs. 23-24):

- a non-dedicated second processing circuit, for coupling to the image buffer, that, at least after each of the plurality of images is stored in the image buffer and after a request by the capture system, attempts decoding processing of the plurality of images; (column 7, lines 25-51; column 33, lines 1-12; column 34, line 26 to column 35, line 58; The interrupts sent by the PC card is the request. The PDA and personal computer are general-use computers and thus contain no processing circuit dedicated to a specific application. The circuit under control of CPU and a computer program dynamically changes portion of the CPU circuit to perform a specific job such as decoding at a time.)

-- wherein the number of the images is predetermined. (column 51, lines 39-41)

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b. With regard to Claims 15-18, Postman teaches a coded image capture and decoding system comprising:

- a remote capture unit comprising (column 7, line 52 to column 8, line 37; combination of blocks 505 and 510 of Figs. 23-24):
 - an image buffer that stores the plurality of images; (column 33, lines 1-12)
- a host image processing unit, operably coupled to the remote capture unit, (block 500 of Figs. 23-24) comprising:
 - a processing circuit; (column 51, line 39 to column 52, line 6; The part of circuit programmed by the barcode decode software.)
 - (1) code processing circuitry, communicatively coupled to the processing circuit, selectively directing the processing circuit to decode the plurality of coded images, wherein the processing circuit selectively responds to the code processing circuitry to control the time at which decode processing will be performed and (2) interface circuitry that assists in delivering the coded images to the processing circuit for decoding at least after each of the plurality of images is stored in the image buffer; (column 51, line 39 to column 52, line 6; The part of circuit loaded with the barcode client application 786 is the code processing circuit for directing and controlling the decoding process. The interface 800 in the PC card shown in Fig. 37 is the interface.)
 - the interface circuitry utilizes wireless transmissions. (column 20, lines 1-7)

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Postman as applied to Claim 1 above, and further in view of Metlitsky et al. (US patent 5,545,886 cited previously.)

Postman teaches the parent Claim 1. However, Postman does not explicitly teach that a composite image is formed from the images as required.

Metlitsky teaches:

-- capturing a plurality of images from a target by multiple scans; (column 11, lines 41-52; Each scan generates an image.)

-- wherein the number of the images is predetermined; (column 9, lines 26-36)

-- constructing a composite image from the captured images. (column 11, lines 41-52.)

It is desired to enhance reliability of decoding of a bar code. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply Metlitsky's teaching to process the images derived from a target using Postman's remote capture unit and deliver the image to Postman's host system to form a composite image for decoding, the combination enhances reliability of decoding of the bar codes.

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8. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Postman as applied to Claim 1 above, and further in view of Grodevant (US patent 5,260,554 cited previously.)

Postman teaches the parent claim 1. However, it does not teach using proximity screening as recited in the claims.

Grodevant teaches:

-- performing proximity screening of image data from the optical system and initiates a capturing cycle. (column 4, lines 31-66)

It is desired to be able to initiate decoding of a bar code automatically. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply Grodevant's proximity screening to initiate image capturing of bar codes for decoding to achieve automatic examination of bar codes on objects taught by Postman, because the combination improves efficiency of bar-code reading.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Postman as applied to Claim 1 above, and further in view of Tymes (US patent 5,157,687 cited previously.)

Postman teaches the parent Claim 1. However, Postman does not explicitly teach that the recited transition points.

Tymes teaches that a processing circuit converts the image data into a plurality of transition points. (column 11, lines 4-30)

It is desired to facilitate decoding of a bar code. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to combine Tymes 's and Postman's

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teachings to convert Postman's image data into a plurality of transition points for decoding, the combination facilitates decoding of the bar codes because it provides a better signature of a barcode.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Postman as applied to claim 1 above, and further in view of Park (US patent 5,675,424 listed in paper #4.)

Postman teaches the parent claim 1. However, Postman does not teach parallel decoding as recited.

Park teaches a parallel decoding method. (Fig. 4; column 3, lines 14-39)

It is desired to be able to use a low-speed decoder as well as high-speed decoder to decode bar codes and images. As taught by Park, decoding in parallel with a set of decoders can speed up its overall decoding speed. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use parallel decoding taught by Park in the system taught by Postman to decode bar codes, because the combination expands the capability of the system by increasing process speed or allowing the use of low-speed processors.

Conclusion

11. THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). The Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wenpeng Chen whose telephone number is 703 306-2796. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on 703 308-7452. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications. TC 2600's customer service number is 703-306-0377.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Wenpeng Chen
Examiner
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April 7, 2003

